

ATTORNEY'S DOCKET NO: H063070003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

James F. Rieke and Timothy J. Rittof

Serial No:

10/619,280

Conf. No:

Not yet assigned

Filed:

July 14, 2003 (07.14.2003)

For:

SYSTEM AND METHOD OF PROCESSING MIXED-PHASE STREAMS

Examiner: Art Unit:

Not yet assigned Not yet assigned

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the 13th day of August, 2003.

Beth Phillips

Commissioner For Patents P.O. Box 1450 Alexandria, VA 22313-1450

STATEMENT FILED PURSUANT TO THE DUTY OF DISCLOSURE UNDER 37 CFR §§1.56, 1.97 AND 1.98

Sir:

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, Applicants requests consideration of this Information Disclosure Statement.

PART I. Compliance with 37 C.F.R. §1.97

This Information Disclosure Statement has been filed before the mailing date of a first Office Action on the merits in the above-identified case. No fee or certification is required.

PART II. Information Cited

Applicants hereby makes of record in the above-identified application the information listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

PART III. Remarks

Documents cited anywhere in the Information Disclosure Statement are enclosed unless otherwise indicated. It is respectfully requested that:

-2-

1. The Examiner consider completely the cited information, along with any other

information, in reaching a determination concerning the patentability of the present

claims;

2. The Examiner sign the enclosed form PTO-1449 to evidence that the cited information

has been fully considered by the Patent and Trademark Office during the examination of

this application; and

3. The citations for the information be printed on any patent which issues from this

application.

By submitting this Information Disclosure Statement, Applicants makes no representation

that a search has been performed, of the extent of any search performed, or that more relevant

information does not exist.

By submitting this Information Disclosure Statement, Applicants makes no representation

that the information cited in the Statement is, or is considered to be, material to patentability as

defined in 37 C.F.R. §1.56(b).

By submitting this Information Disclosure Statement, Applicants makes no representation

that the information cited in the Statement is, or is considered to be, in fact, prior art as defined

by 35 U.S.C. §102.

Notwithstanding any statements by Applicants, the Examiner is urged to form his own

conclusion regarding the relevance of the cited information.

An early and favorable action is respectfully requested.

Respectfully submitted,

James F. Rieke and Timothy J. Rittof, Applicants

By:

Peter C. Lando, Reg. No. 34,654

Elias Domingo, Reg. No. 52,827

Lowrie, Lando & Anastasi, L.L.P.

Riverfront Office Park

One Main Street, 11th Floor

Cambridge, MA 02142

Telephone (617) 395-7000

Facsimile (617) 395-7070

Docket No. H063070003 Dated: August 13, 2003

xndd

700406.1

FORM PTO-1449/A and B (Modified)

Sheet

APPLICATION NO.: 10/619,280

ATTY. DOCKET No.: H063070003

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

of

2

FILING DATE: July 14, 2003

APPLICANT: James F. Rieke and Timothy J. Rittof

GROUP ART UNIT: Not yet assigned

EXAMINER: Not yet assigned

U.S. PATENT DOCUMENTS

Examiner's Initials#	Cite	U.S. Patent Document		Name of Patentee or Applicant of Cited	Date of Publication or of issue	
		No.	Number	Kind Code	Document	of Cited Document MM-DD-YYYY
	Al	5,242,016		Voss et al.	09-07-1993	
	A2	5,284,203		Dauvargne	02-08-1994	
	A3	5,299,635		Abraham	04-05-1994	
	A4	5,307,867		Yasuda et al.	05-03-1994	
	A5	5,318,111		Young et al.	06-07-1994	
	A6	5,323,849		Korczynski, Jr. et al.	06-28-1994	
	A7	5,323,850		Roberts	06-28-1994	
	A8	5,323,851		Abraham	06-28-1994	
	A9	5,329,995		Dey et al.	07-19-1994	
	A10	5,341,872		Mercurio	08-30-1994	
	A11	5,348,083		Hosoya et al.	09-20-1994	

FOREIGN PATENT DOCUMENTS

Examiner's Initials#	Cite No.	Foreign Patent Document		ent	Name of Patentee or Applicant of Cited	Date of Publication of	Translation
		No.	Office/ Country	Number	Kind Code	Document (not necessary)	Cited Document MM-DD-YYYY

OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's	Cite	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the	Translation	
Initials#	No	item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue	(Y/N)	
		number(s), publisher, city and/or country where published.		
	Cl	ARTHUR E. BERGLES, "Augmentation of Heat Transfer," 2.5 Single-Phase Convective Heat Transfer,	1 1	
		2.5.11-1 – 2.5.11-12, 1983 Hemisphere Publishing Corporation.	<u> </u>	
	C2	ARTHUR E. BERGLES, "Augmentation of Condensation," 2.6 Condensation, 2.6.6-1 – 2.7.9-5, 1983	1	
		Hemisphere Publishing Corporation.	1	
	C3	W.J. MARNER et al., "Augmentation of Highly Viscous Laminar Heat Transfer Inside Tubes with Constant		
]	}	Wall Temperature," Experimental Thermal and Fluid Science 1989; 2:252-267; 1989 by Elsevier Science	1 1	
		Publishing Co., Inc., New York, NY.		
	C4	R.S. VAN ROOYAN et al., "Laminar Flow Heat Transfer in Internally Finned Tubes With Twisted-Tape		
		Inserts," p. 577-581, University of Stellenbosch, Stellenbosch, South Africa, 1978.	\\	
	C5	D.R. OLIVER et al., "Heat Transfer Enhancement in Round Tubes Using Wire Matrix Turbulators: Newtonian	1	
		and Non-Newtonian Liquids," Chem. Eng. Res. Des., Vol. 66, November 1988, pp. 555-565.	11_	
	C6	"Fine-Fin" Product Literature, publication date unknown.		
	C7	"Heat Exchanger Tubes with Increased Heat Transfer," VDM Tube Division 1978.		

/0	156			
FORM PTO-1449/A and B (Modified	APPLICATION NO.: 10/	619,280 ATTY. DOCKET No.: H063070003		
INFORMATION DISCESS	SURE FILING DATE: July 14,	FILING DATE: July 14, 2003		
INFORMATION DISCRESS STATEMENT BY APPLICATION	APPLICANT: James F. I	APPLICANT: James F. Rieke and Timothy J. Rittof		
Sheet 2 of 2	GROUP ART UNIT: No	t yet assigned EXAMINER: Not yet assigned		

OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's Initials#	Cite No	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue		Translation (Y/N)	
<u></u>		number(s), publisher, city and/or country where published.			
	C8	P.J. MARTO et al., "An Experimental Comparison of Enhanced Heat Transfer Condenser Tubing," pp. 1-9,		_	
	1	Department of Mechanical Engineering, Naval Postgraduate School, Monterey, California, publication date			
		unknown			
	C9	M.H. MEHTA et al., "Heat Transfer and Frictional Characteristics of Spirally Enhanced Tubes for Horizontal			
		Condensers," pp. 11-21, Gujarat State Fertilizers Co. Ltd. Baroda, India; Department of Chemical Engineering,			
		Indian Institute of Technology, Powai, Bombay, India., publication date unknown			
	C10	T.C. CARNAVOS, "Heat Transfer Performance of Internally Finned Tubes in Turbulent Flow," pp. 61-67,			
		Noranda Metal Industries, Inc., Forge-Fin Division, Newtown, Connecticut, publication date unknown			
	C11	R.L. WEBB et al., "A Parametric Analysis of the Performance of Internally Finned Tubes for Heat Exchanger			
	}	Application," Department of Mechanical Engineering, The Pennsylvania State University, University Park,)		
		Pennsylvania, pp.69-77, publication date unknown			
	C12	T.C. SCOTT et al., "Accurate, Simple Expressions for the Efficiency of Single and Composite Extended			
	}	Surfaces," Mechanical and Aerospace Engineering, University of Virginia, Charlottesville, Virginia, pp. 79-85,			
·	<u> </u>	publication date unknown	· ·		
	C13	H.M. SOLIMAN, "The Effect of Fin Material on Laminar Heat Transfer Characteristics of Internally Finned			
		Tubes," Department of Mechanical Engineering, University of Manitoba, Winnipeg, Manitoba, Canada, pp. 95-	1		
		102, publication date unknown		_	
	C14	R.K. GUPTA et al., "Heat Transfer and Friction Characteristics of Newtonian and Power-Law Type of Non-			
	Į	Newtonian Fluids in Smooth and Spirally Corrugated Tubes," Solar Energy Division, Jyoti Ltd., Baroda, India;			
		Department of Chemical Engineering, Indian Institute of Technology, Bombay, India, pp. 103-113.			
	C15	A.E. BERGLES, "Chapter 3 – Techniques to Augment Heat Transfer," pp. 3-1 – 3-80, Handbook of Heat			
· · · · · · · · · · · · · · · · · · ·		Transfer Applications, Second Edition, McGraw-Hill Book Company 1985.	<u> </u>		
	C16	T.J. RABAS, "Selection of the Energy-Efficient Enhancement Geometry for Single-Phase Turbulent Flow Inside			
	1	Tubes," 1989 National Heat Transfer Conference, HTD-Vol. 108, Heat Transfer Equipment Fundamentals,			
		Design, Applications and Operating Problems, 1989, pp. 193-204.			
	C17	R. ANTONELLI et al., "Design and Application Considerations for Heat Exchangers with Enhanced Boiling			
		Surfaces," Evaporation and Condensation, 1983, pp. 175-191.		_	
	C18	V.H. MORCOS, "Performance of Shell-And-Dimpled-Tube Heat Exchangers for Waste Heat Recovery," Heat			
		Recovery Systems & CHP, Vol. 8, No. 4, pp. 299-308, 1988, Pergamon Press plc, Great Britain.			
	C19	R. WILTZ, "Engineered Products and Good Design Combine to Improve HX Performance," reprinted from			
		Chemical Processing September 1992			
	C20	S. YILMAZ et al., "Performance of Finned Tube Reboilers in Hydrocarbon Service," The American Society of			
	L	Mechanical Engineers, New York, NY, publication date unknown			
	C21	J.A. MOORE, "Fintubes Foil Fouling for Scaling Services," pp. 8-10, Chemical Processing August 1974			

EXAMINER	DATE CONSIDERED
L	

#EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

^{*}a copy of this reference is not provided as it was previously cited by or submitted to the office in a prior application, Serial No., filed, and relied upon for an earlier filing date under 35 U.S.C. 120 (continuation, continuation-in-part, and divisional applications).